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### EPIZOITES ASSOCIATED WITH *BATHYNECTES SUPERBUS* (DECAPODA: PORTUNIDAE)<sup>1, 2</sup>

The only known documentation of epizoites occurring on *Bathynectes superbus* (Costa 1853) is that of Capart (1951), who noted a stalked barnacle, *Scalpellum* sp., on specimens from the South Atlantic coast of Africa. This note describes epizoites present on *B. superbus* from the western North Atlantic Ocean.

Crabs were obtained from several cruises along the eastern coast of North America (lat. 36°33'N-39°38'N to long. 73°00'W-74°43'W): RV *Columbus Iselin* (cruise 73-10) from 252 to 335 m; RV *Dan Moore* (73-030) from 122 to 232 m; RV *Albatross IV* (74-4) from 236 to 300 m; and RV *Eastward* (E-2-74) from 280 to 350 m. Gills, branchial chambers, and external surfaces of 172 crabs were examined. Crabs often supported more than one epizoite.

Crabs were most heavily fouled (65%) with a "*Perigonimus*"-like hydroid. Quotations are present around the name "*Perigonimus*" because the genus is not valid and is a representative of a poorly known group, the systematics of which need revision (D. R. Calder, pers. commun.). The "*Perigonimus*"-like hydroid was most frequently found associated with setae along the ventral anterolateral border and on the ecydial suture line. *Trilasmis* (*Poecilasma*) *kaempferi inaequilaterale* Pilsbry (Cirripedia: Scalpellidae) was found on 13% of the *B. superbus* examined. It was present on all exposed regions of the carapace, pereopods, and abdomen. An eastern Atlantic specimen in the U.S. National Museum collections (*Geronimo*-2-203) had approximately 100 *T. k. inaequilaterale* on the dorsal carapace, pereopods, eyes, and mouthparts. *Anomia aculeata* (Pelecypoda) was relatively abundant (14%) and frequently occurred in indentations of the dorsal carapace and on the carinae of pereopods. Other organisms on the carapace were calcareous tubes of an unidentified polychaete (<1%) and *Stegopoma plicatile*, a thecate hydroid (<1%). The latter were found along the ventral anterolateral surface of the carapace. No organisms were found within the branchial chamber.

Figure 1 shows the occurrence of epizoites on *B. superbus* according to sex, size group, and molt stage. Size groups of short carapace width ( $\leq 35$  mm, 36-45 mm, 46-57 mm,  $\geq 58$  mm) are based on arbitrarily chosen modes from a size-frequency distribution (Lewis 1975).

Crabs were assigned to molt stages described by Drach and Tchernigovtzeff (1967): anecydysis (C<sub>1</sub>-C<sub>4</sub>), proecdysis (D<sub>1</sub>-D<sub>4</sub>), postecdysis (A<sub>1</sub>-B<sub>2</sub>).

There is apparently no preference of epizoites for male or female crabs, but there is an association with molt stage and size. As expected, crabs in anecydysis are more heavily fouled than those which have recently molted (A<sub>1</sub>-B<sub>2</sub>). Larger crabs (>46 mm) supported a variety of epizoites while those  $\leq 35$  mm were colonized by *Perigonimus* only. This may be attributable to the greater surface available for epizoite set on larger crabs and the lower frequency of molt for these crabs.

The epizoites are inhabitants of the shelf-edge upper slope habitat within the bathymetric range of *Bathynectes*. *Trilasmis* (*Poecilasma*) has a known range along the western Atlantic from Martha's Vineyard, Mass. to Key West, Fla., having been recorded at depths from 21.6 to 1,733 m, chiefly on the carapace of the brachyurans *Geryon*

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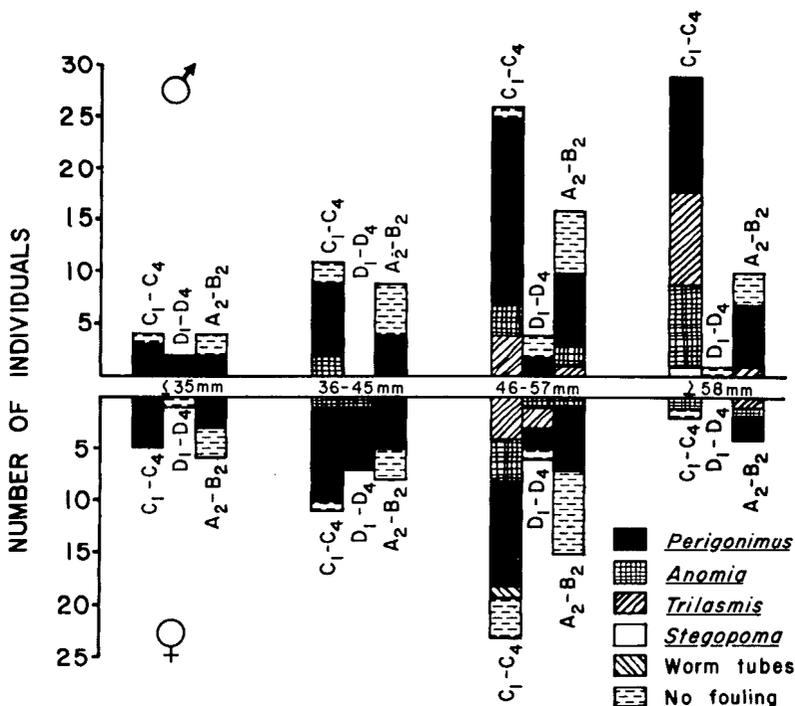


FIGURE 1.—Occurrence of epizoids on male and female *Bathynectes superbus* at anecydysis (C<sub>1</sub>-C<sub>4</sub>), proecdysis (D<sub>1</sub>-D<sub>4</sub>), and postecdysis (A<sub>2</sub>-B<sub>2</sub>) for four modal size (short carapace width) groups (≤35 mm, 36-45 mm, 46-57 mm, ≥58 mm).

*quinquedens* Smith (Pilsbry 1907) and *Cancer borealis* Stimpson, collected from the same cruises from which *Bathynectes* were obtained. *Trilasmis* (*Poecilasma*) was also observed on mature lobsters, *Homarus americanus* H. Milne-Edwards. These decapods are bathymetric associates of *B. superbus* (Lewis 1975). *Trilasmis* (*Poecilasma*) has also been found on *Hyposophrys noar*, a brachyuran from the Straits of Florida (Williams 1974).

*Anomia aculeata* has been recorded from the Arctic Ocean to Cape Hatteras, N.C. within a bathymetric range of 1.8 to 144 m (Smith 1937). The stations at which this pelecypod occurred on *Bathynectes* were in depths greater than 200 m.

The hydroid, *Stegopoma plicatile*, is common along the east coast of the United States from Hudson Bay to Cape Hatteras with a bathymetric range of 45 to 1,733 m (Fraser 1944).

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